



Printed Pages : 4

EME101

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 4302

Roll No.

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B.Tech

(SEM I) ODD SEMESTER THEORY EXAMINATION 2009-10
MANUFACTURING PROCESSES

Time : 2 Hours]

[Total Marks : 50

Note : Be precise and scientific in writing.

SECTION - A

Attempt all the questions :

This section contains 10 questions. All questions carry 10 equal marks.

- 1 Energy required to rupture the material is known as _____.
- 2 List the alloying elements of duralumin.
- 3 Misrun is a metal forming defect. (True/False)
- 4 Write the two welding defects.



5 Brittle failure occurs when a part is subjected to

- (i) compressive stress
- (ii) tensile stress
- (iii) fluctuating stress
- (iv) uniform stress

6 Finishing is

- (i) Machining Process
- (ii) Welding Process
- (iii) Joining Process
- (iv) Metal Forming Process.

7 Hole is produced in casting with the help of

_____.

8 Molding sand is called green sand because it contains

- (i) bakelite
- (ii) moisture
- (iii) no moisture
- (iv) dry sand.

9 In compound rest method of taper turning, compound rest is swivelled by the angle.

(i) $\tan \alpha = \frac{d_1 - d_2}{l}$

(ii) $\tan \alpha = \frac{d_1 - d_2}{2l}$

(iii) $\tan \alpha = L \times \frac{d_1 - d_2}{l}$

(iv) $\tan \alpha = \frac{d_1 - d_2}{4l}$

10 Name the two major advantages in favour of powder metallurgy process.

SECTION - B

Attempt any **three** questions. All questions carry
equal marks :

15

1 Explain the following terms with suitable example :

- (i) Ductility
- (ii) Toughness
- (iii) Creep

2 Explain the properties and applications of

- (i) Wrought Iron
- (ii) Tool Steel
- (iii) Cast Iron

3 Explain with neat sketch, the basic working principle of Rolling. Describe its application in industry.

- 4 Differentiate between shaper and planner. With the help of neat sketch, explain the basic components of lathe machine.
- 5 Describe, with suitable examples, plant layout and its different types and applications.

SECTION - C

Attempt any **four** questions. Each question carries **15** equal marks.

- 1 Write short notes on Annealing and Normalizing of carbon steels.
- 2 Differentiate between hot and cold working of metals. Bring out the advantages and disadvantages of each of these techniques.
- 3 With the help of neat diagram, explain the working principle of cupola. Also write its limitations.
- 4 Distinguish between welding, brazing, and soldering processes. Write about the importance of fluxes being used in welding.
- 5 With the help of schematic sketch, describe the basic working principle of grinding process.
- 6 Write short notes on :
 - (i) Ceramics and its applications
 - (ii) Composite materials and their applications.

